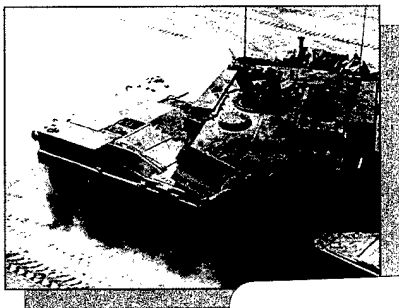


# Results Of The First Two Years

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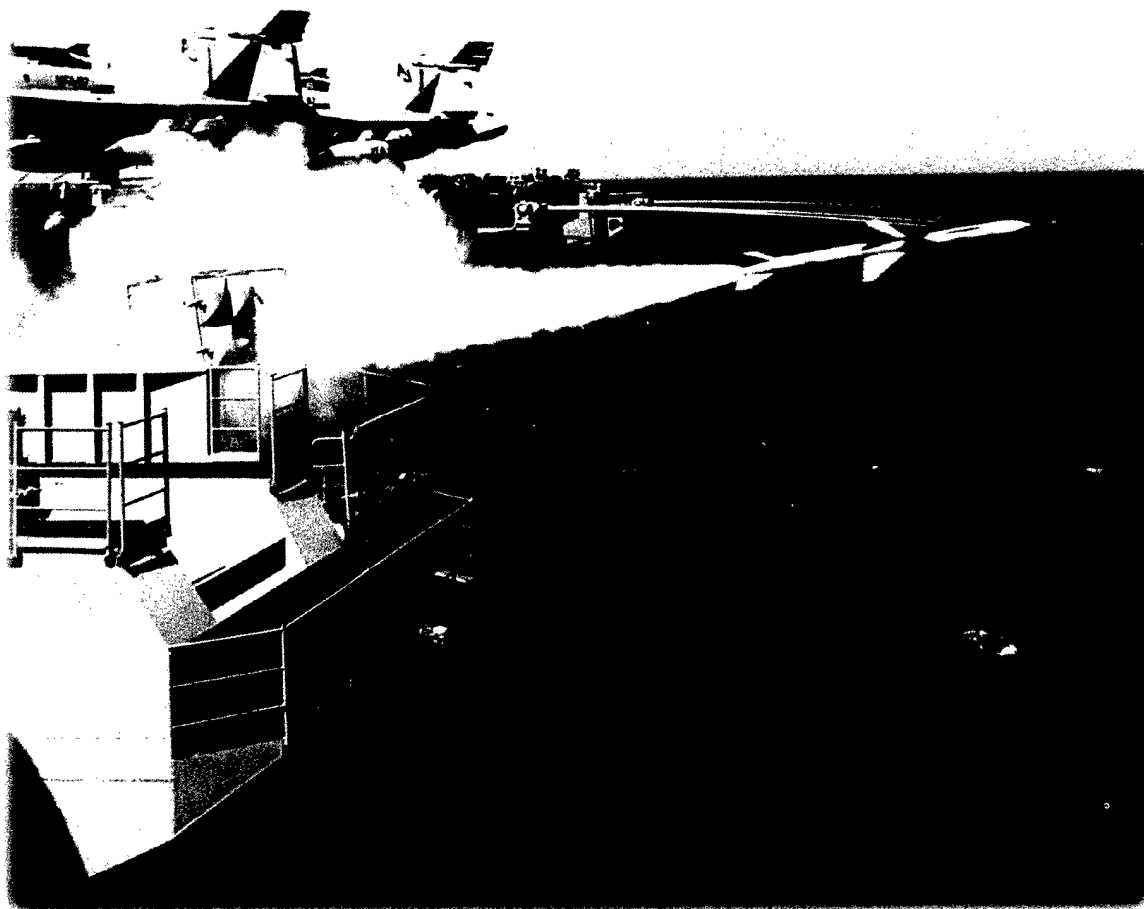
Office of the  
Under Secretary  
of Defense for  
Acquisition &  
Technology

## Acquisition Practices

June 1996

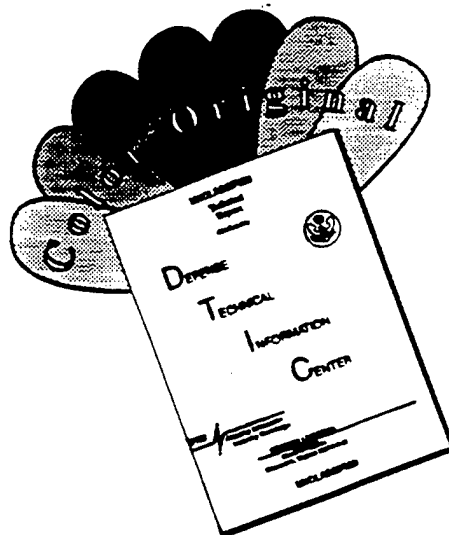
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THE UNIVERSITY OF CHICAGO



*The AIM/RIM-7R Sea Sparrow Missile Program eliminated nearly 800 military specifications and standards in a recent upgrade procurement.*

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# Introduction

The Department of Defense is engaged in radical reform of the way it conducts its acquisition business. Declining requirements and budgets are resulting in fewer purchases of defense-unique products. Between 1985 and 1996, defense procurement accounts fell from over \$100 billion to \$43 billion. In addition, the defense industry has undergone profound changes with companies restructuring, consolidating, diversifying, or leaving the industry entirely. To meet defense needs, the Department can no longer afford to rely solely or primarily on defense-unique capabilities. Our acquisition reform efforts are not just a noble endeavor. These efforts must succeed to ensure that we have the industrial and technological capabilities to meet current and projected national security requirements.

A key element of acquisition reform is changing the way the Department states its requirements in specifications and standards, and then applies those documents in solicitations and contracts. Detailed military-unique requirements can present barriers to the Department in accessing the commercial industrial base. The objective of "MilSpec Reform" is to break down those barriers in order to achieve three primary goals: save money; remove impediments to getting state-of-the-art technology into our weapon systems; and facilitate the diversification into commercial markets of firms that have traditionally produced goods primarily, if not solely, for Defense. To achieve these goals, Secretary Perry directed that MilSpec Reform produce three results:

- ▶ Establish a performance-based solicitation process;
- ▶ Implement standardization document improvements; and
- ▶ Create irreversible cultural change.

While much remains to be done, we have made significant progress. This brief summary highlights some of our accomplishments since Secretary Perry began MilSpec Reform with his policy memorandum of June 29, 1994. We hope that you find it helpful to see how far the Department has progressed and as an indicator for future directions.



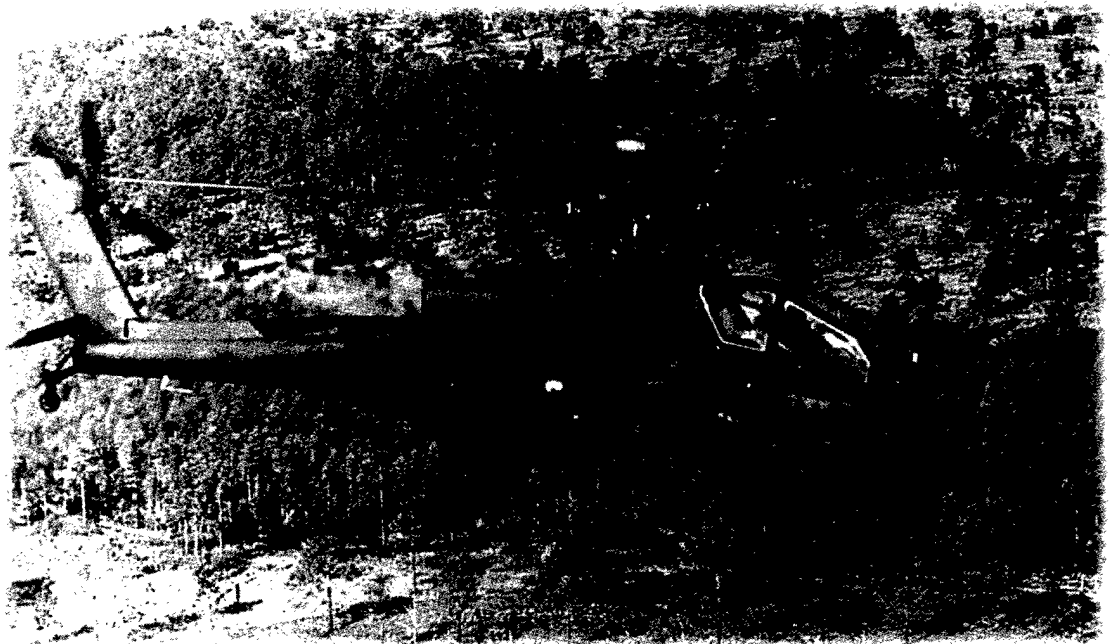
Walter B. Bergmann, II  
Director, Acquisition Practices

# Cultural Change

## SOLICITATION SCRUBS

**F**undamental to cultural change is breaking the paradigm of routinely imposing military specifications and standards. All too often, military specifications and standards have been invoked in solicitations and contracts without understanding what is the true requirement. Premature application, over-application, or inappropriate application of detailed specifications and standards sometimes has the unintended result of increasing costs, preventing the insertion of more technologically advanced solutions as the design matures, and excluding commercial market solutions.

To break this paradigm, the military departments have established procedures for “scrubbing” solicitations to ensure proper application of military specifications and standards, while encouraging greater use of performance specifications and commercial standards. For example, the Air Force has chartered a Request for Proposal (RFP) Scrub Team to review contracts and provide advice on the application of acquisition reform policies. The Air Force has established RFP Support Offices at the center level to review all contracts that exceed \$100,000.



*The Longbow Apache Helicopter modification program reduced the number of military specifications and standards in the RFP from 47 to 1.*

### **Navy Sparrow Missile Homing Improvement Program**

- ▶ Nearly 800 military specifications and standards eliminated from Low-Rate Initial Production Request for Proposal.
- ▶ Only 6 military specifications and standards cited as solicitation requirements.

### **Mark 48 Torpedo**

- ▶ 103 military specifications and standards reduced to 5 in the solicitation.

### **C-130 Periodic Depot Maintenance Program**

- ▶ 399 page RFP reduced to 195 pages.
- ▶ 158 page statement of work (SOW) reduced to 3 page statement of objectives (SOO).
- ▶ 200 military specifications and standards cited in RFP reduced to 5.

### **Maintenance Skills Trainer Program**

- ▶ RFP reduced from 1,505 pages to 200 pages.
- ▶ SOW reduced from 524 pages to 4-page SOO.
- ▶ 81 data requirements reduced to 4.
- ▶ 21 military specifications and standards cited in RFP totally eliminated.

### **KC-135 Avionics Upgrade**

- ▶ No military specifications or standards cited in RFP.
- ▶ 335 data requirements reduced to 39.

### **Milstar Satellite Communications System**

- ▶ Number of military specifications and standards reduced from 110 to 43.
- ▶ Number of Government acceptance events reduced from 770 to 12.
- ▶ Number of Government inspection requirements reduced from over 19,000 to less than 100.

### **Surface Ship Anti-Submarine Warfare Combat System**

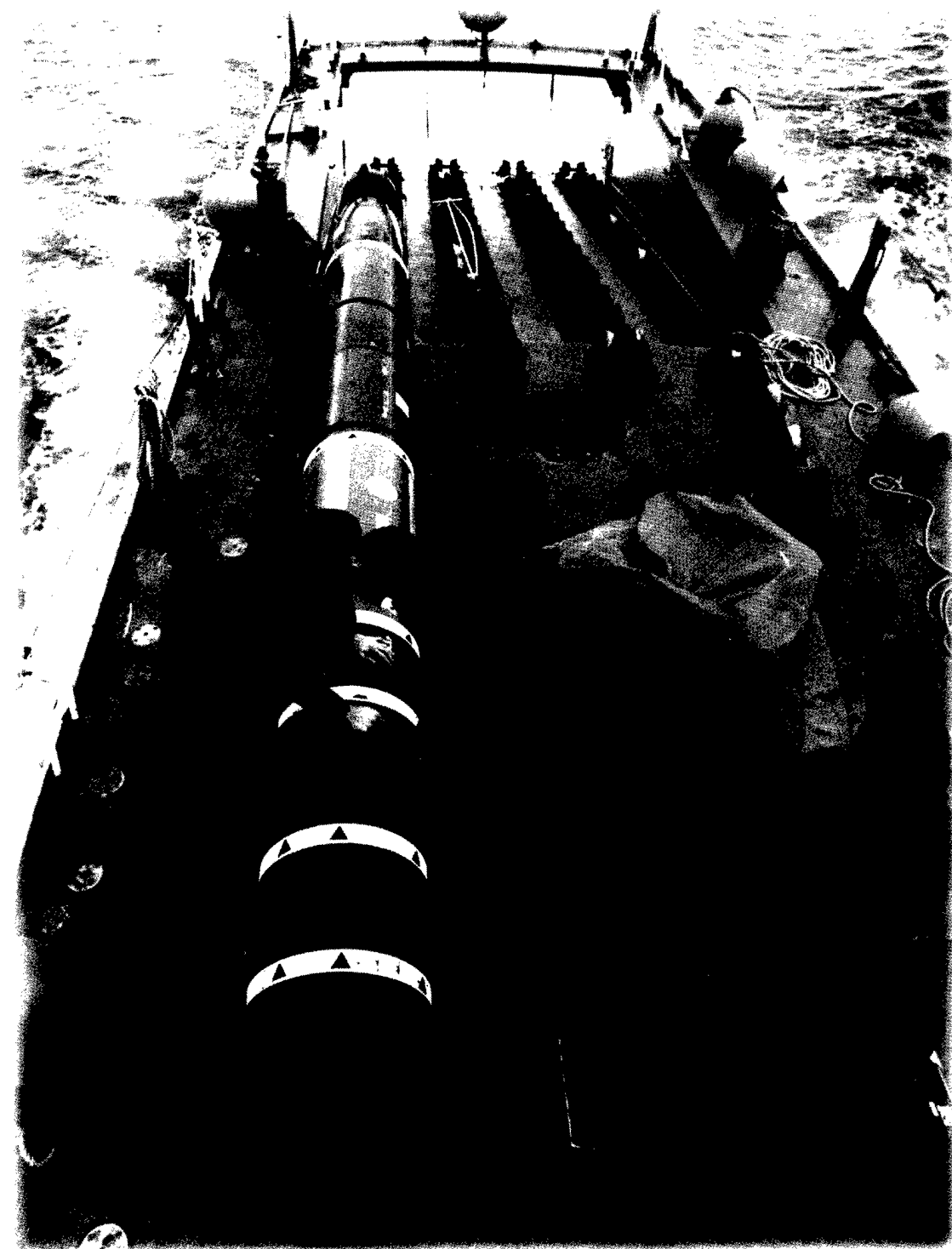
- ▶ 67 military specifications and standards reduced to 1 military standard and 12 commercial standards.
- ▶ 212 data requirements reduced to 132.

### **LPD-17**

- ▶ Joint Government-industry team reduced the number of military specifications from 710 to 149.

### **AH-64D Longbow Apache Helicopter Modification Program**

- ▶ 47 military specifications and standards reduced to 1 military standard.
- ▶ 117 data requirements reduced to 15.
- ▶ SOW reduced from 113 pages to 25.



*In the Mark 48 torpedo solicitation military specifications and standards were reduced from 103 to only 5.*



## ROAD SHOWS

Senior managers from the military departments and defense agencies have conducted road shows across the country to show their commitment to MilSpec Reform and provide a forum for sharing acquisition experiences and increasing understanding about MilSpec Reform goals, policies, and procedures.

*13,362 people have attended 175 MilSpec Reform road shows.*

## MILSPEC REFORM TRAINING

MilSpec Reform has produced dramatic changes to long-standing policies, procedures, and ways of doing business. People have been asked to rethink why and how they develop and use specifications and standards. To teach people the new ways of doing business required major revamping of existing courses and the creation of new courses on how to write performance specifications.

### Since June 1994:

- ▶ 534 people trained at 12 defense specification management courses
- ▶ 1257 people trained at 64 nondevelopmental item courses
- ▶ 924 people trained at 41 commercial item description courses
- ▶ 3,835 people trained at 138 performance specification courses





*Use of performance specs resulted in a cost savings of \$3.6M for the eyesafe replacement for the laser rangefinder in the Abrams tank.*

# Performance Specifications

Secretary Perry directed that wherever possible, DoD requirements be defined by performance specifications. By not dictating a predetermined design solution, the Department allows contractors to offer the most cost effective, technologically advanced solutions to meet the requirement. Performance specifications also allow commercial alternatives to meet the requirement.

Performance specifications can be used to define the requirements of a wide variety of items ranging from complete weapon systems to components to troop support items. For commercially-available items, the Department of Defense is preparing simplified, performance-based product descriptions called Commercial Item Descriptions (CIDs). Performance specifications are starting to yield benefits in terms of cost savings and improved performance.

- Army Tank & Automotive Command bought an eyesafe replacement for the laser rangefinder in the Abrams Tank and Armored Gun System using a performance specification. Use of a performance specification made competition possible for an item previously bought sole source.

**RESULT:** Cost savings of \$3.6 M over last sole source contract; 30 percent under the price of the previous non-eyesafe laser rangefinder.

- The Defense Personnel Support Center (DPSC) has an aggressive program to replace military specifications for clothing and textiles with commercial item descriptions. Using market research techniques, DPSC assesses what is already available to meet the performance

requirements, thus reducing costs by accessing the commercial market and reducing testing.

**RESULT:** 48 MilSpec clothing and textile specifications were replaced by commercial item descriptions, which reduced procurement costs for these items in FY95 by over \$13M.

- The Army's follow-on award for the Joint Strategic/Tactical Relay System (JSTARS) Light Ground Station Module (LGSM) achieved unit cost savings primarily due to use of industry standards, a performance specification that focused on system level functional requirements, and emphasis on commercial and non-developmental item components.

**RESULT:** Cost savings of \$1.46M.

## Facilitating Integration

A primary goal of acquisition reform is to facilitate the integration of the commercial and military industrial bases. Management and process-type military standards have often been identified as a barrier to such integration. As a direct result of the DoD's MilSpec reform efforts, most of these standards have been canceled, converted to guidance handbooks, or in a few cases, replaced with commercial standards. This action establishes the framework for future savings and efficiencies on new contracts, but government-unique management and manufacturing requirements imposed by military specifications and standards on existing contracts prevent the Department of Defense from realizing the full benefits of MilSpec Reform changes.

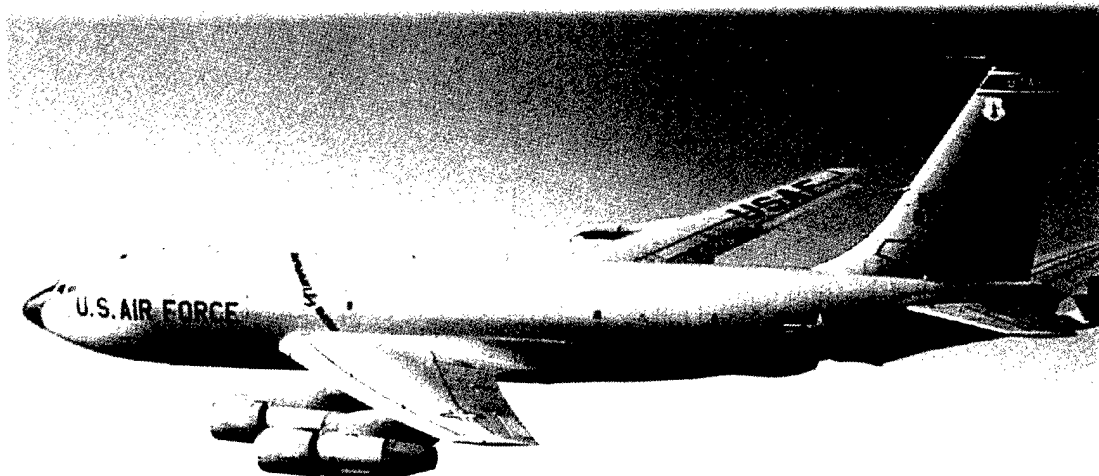
To help capture savings and efficiencies from existing contracts without having to endure the tortuous process of individual contract changes, Under Secretary of Defense Paul Kaminski issued guidance on December 8, 1995, for making "class action" contract changes to existing contracts on a facility-wide basis. The block change initiative establishes an expedited, streamlined approach to evaluate contractors' proposals of block changes and determine where there may be a significant decrease in the cost of performance of existing contracts. Block changes permit the replacement of multiple government-unique management and manufacturing systems with common, facility-wide systems, which in the long run, should reduce costs.

While still in its infancy, the block change-single process initiative is already yielding results. In April 1996, the Department of Defense and Texas Instruments Defense Systems and Electronics Group struck an agreement to allow Texas Instruments to become the first U.S. defense contractor to institute a common set of manufacturing standards for all of its products. This change will allow Texas Instruments to eliminate about 35,000 pounds of hazardous chemicals used in painting each year. This will protect the environment and reduce overall costs by allowing the use of commercial practices on a single production line which makes weapons for the different DoD components.

The Defense Contract Management Command (DCMC) and the Defense Contract Audit Agency (DCAA) have established a DoD Reinvention Laboratory aimed at reducing the cost of Government oversight. The Reinvention Laboratory concept provides an excellent forum for recommending elimination of, or substitution for, military specifications and standards imposed by the Department of Defense, that are not part of commercial practices.

Each Reinvention site has teams, made up of contractor and Government personnel, who are chartered to review requirements and operations, and propose alternatives. Also, at each site, a management council evaluates reinvention strategies, reviews proposals, authorizes changes within local or program discretion, and recommends up-the-chain alternative proposals for approval. Each management council is comprised of the DCMC district commander, the DPRO commander, the regional DCAA manager, the resident DCAA auditor, the program managers and program executive officers doing business with the facility, and top-level contractor representatives. This council can look at individual contract requirements or contract requirements across a factory.

The Reinvention Laboratories are also beginning to show pockets of success. For example, on the C-17 aircraft program, MIL-Q-9858 for quality system programs was replaced with ISO 9000, and other military specifications were eliminated or replaced with best commercial practices. The result has been advanced schedule deliveries, cost savings of approximately \$100,000 per aircraft, and a 40 percent reduction in the Government quality inspection work force.



## Document Infrastructure

**T**hrough MilSpec Reform, the Department of Defense is trying to achieve the proper mix of technical documentation to guide the Department and industry in the design, production, and acquisition of weapon systems and items of support. The Department intends for its document infrastructure to be founded on performance specifications and interface standards for weapon systems and military-unique items of supply; commercial item descriptions and non-government standards for commercial items and processes; and a library of guidance handbooks that preserve lessons learned and offer known technical solutions. Reshaping the existing document infrastructure is a long, arduous task. The Department has reviewed over 30,000 military specifications and standards with the intent of either eliminating them, converting them to performance or commercial type documents; or making them for guidance only. Fortunately, the Department has been working in this direction for several years, but MilSpec Reform has accelerated the effort through the support of senior management and the commitment of resources.

### *Since MilSpec Reform Efforts Began in June 1994....*

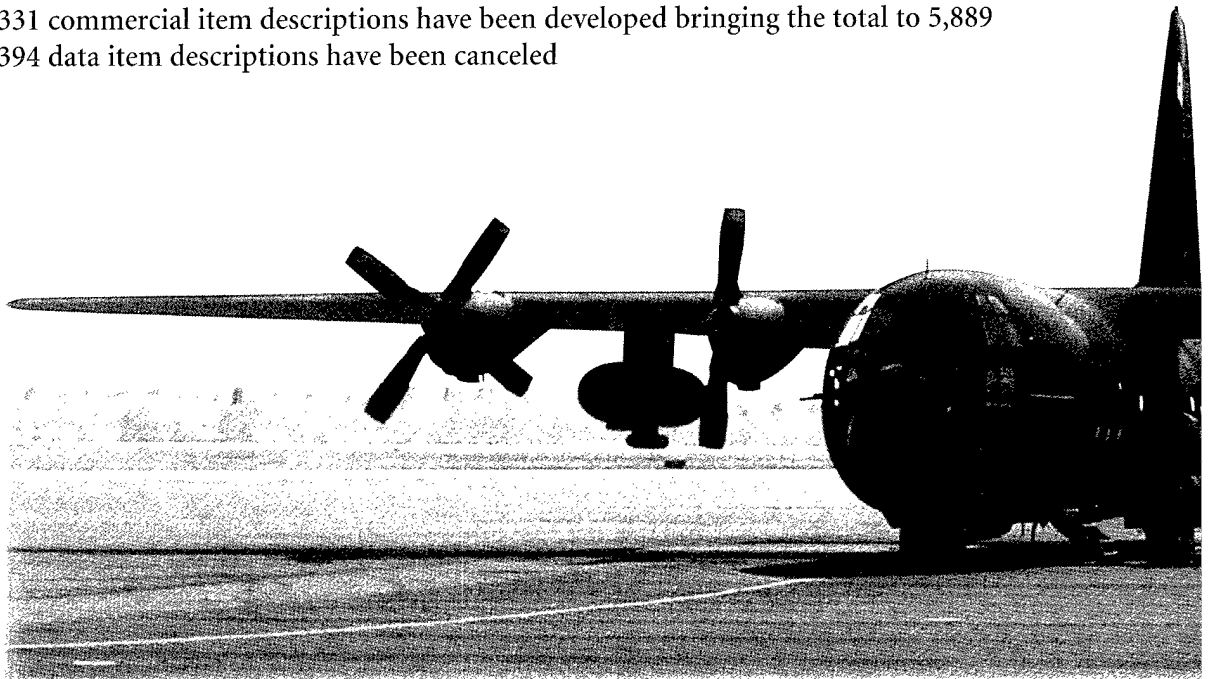
2,676 military specifications and standards have been canceled

207 performance specifications have replaced detail specifications

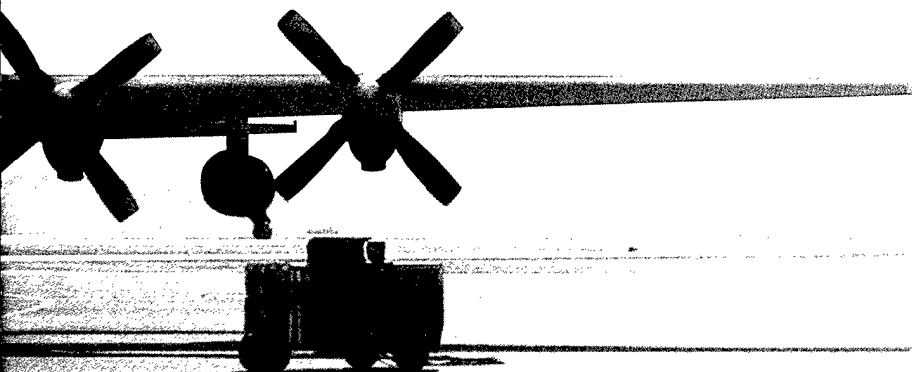
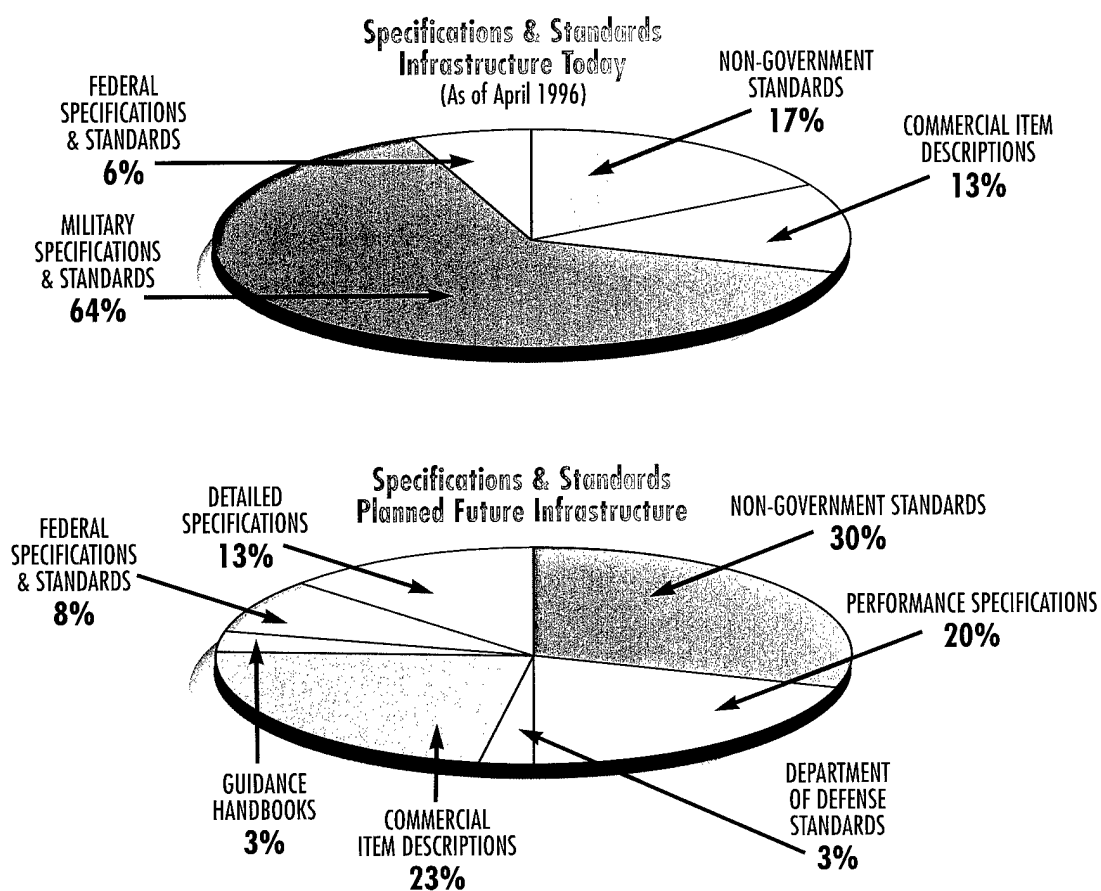
1,699 additional non-government standards have been adopted bringing the total to 7,449

331 commercial item descriptions have been developed bringing the total to 5,889

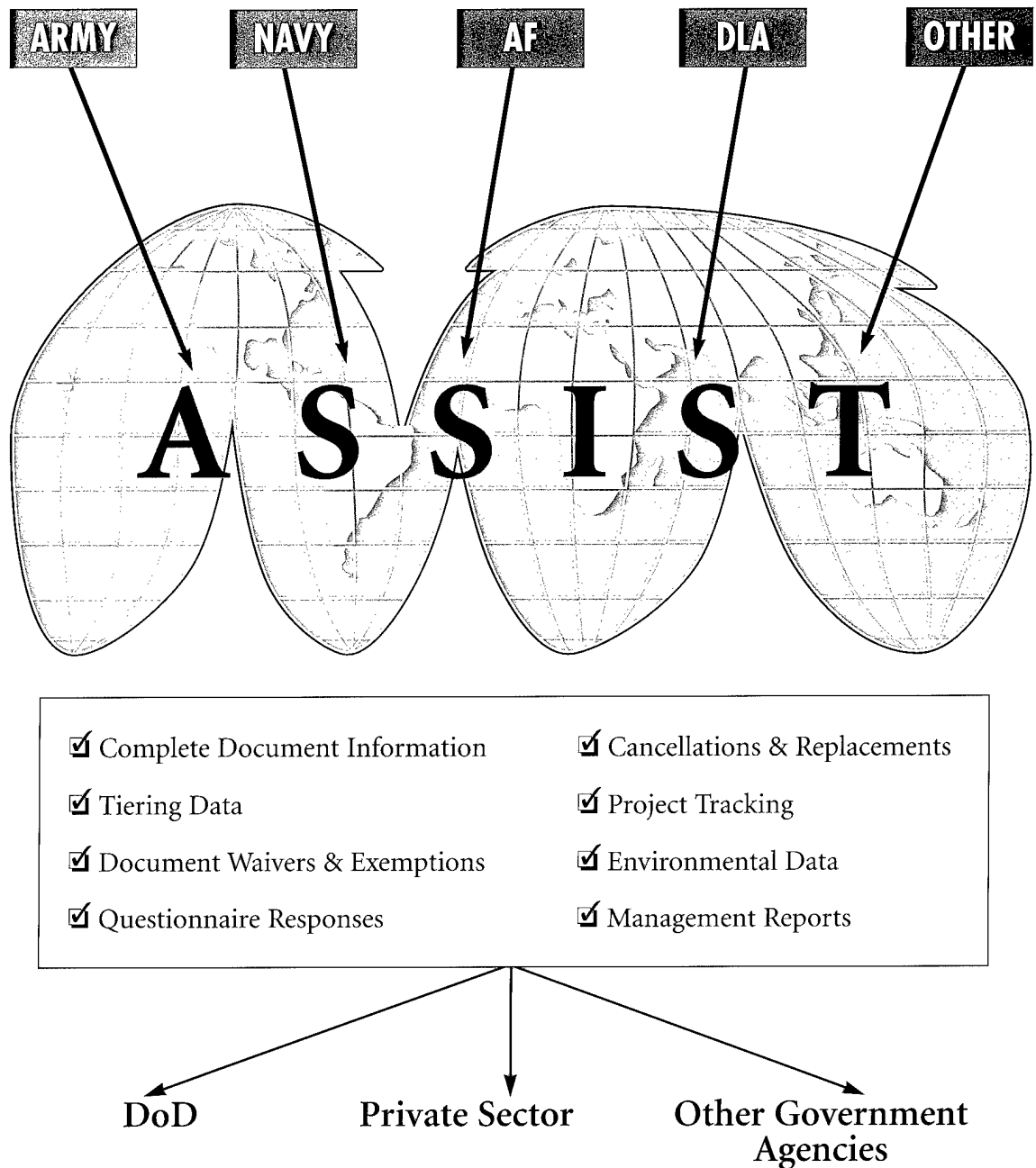
394 data item descriptions have been canceled



The Department's review of over 30,000 military specifications and standards resulted in the planned elimination or replacement of most detailed, "how-to" documents. When fully implemented, the DoD document infrastructure will have achieved the desired balance.



# DoD Document Preparing Activities



# Tools

The demands of MilSpec Reform necessitated the development or enhancement of “tools” to help improve communication, better manage the standardization program, and facilitate the development and application of performance and commercial specifications and standards.

The foremost communication tool developed was the Defense Standardization Program “MilSpec Reform” Homepage on the World Wide Web.<sup>1</sup> In the top 5 percent of the most frequently accessed homepages on the Internet, it includes all policy memos pertaining to MilSpec Reform, the most frequently asked questions and their answers, status reports on the top 100 or so cost-driver documents, lists of proposed canceled documents, lists of recently canceled documents, the Standardization Newsletter, key policy and guidance documents, and hot links to other related homepages.

The Acquisition Streamlining and Standardization Information SysTem (ASSIST) is available to both industry and government. This on-line, automated tool provides a wealth of information for document managers, developers, and users. ASSIST was primarily a document index management tool which provided a complete index of specifications and standards and the responsible document preparing activities, document tiering data, and cancellation and replacement information. Under MilSpec Reform, ASSIST has been expanded to include lists of document waivers and exemptions, the responses to over 30,000 document questionnaires, identification of documents requiring the use of hazardous materials, project tracking data, and a wide variety of management reports.

MilSpec Reform has produced new types of document series and heightened emphasis on earlier commercial acquisition initiatives. To provide guidance for document developers and users, the Department revised its publication on the development of specifications to include performance and published SD-15, “Performance Specification Guide,” which provides expanded coverage on the topic. The Department also revised its publication on the development of standards to provide new direction on the types of standards that may be developed and their condition for use. The Department also developed a guidance handbook on commercial acquisition and nondevelopmental items.

<sup>1</sup>The uniform resource locator (URL) for the homepage is: <http://www.acq.osd.mil/es/std/>





## Savings

**I**t is not possible to calculate the total savings and cost avoidance to date resulting from MilSpec Reform efforts, nor to project future savings, but certain accomplishments suggest that the savings are significant. It should be noted that the savings have already been reflected in current budget estimates or were used to buy additional units, subsystems, or other program enhancement features, or to support force modernization.

The cancellation of numerous specifications and standards has created considerable savings, since these documents no longer require maintenance. The savings differ depending on the complexity and length of the document, but a study by the Logistics Management Institute calculated the annual cost to support a particular insulation specification to be about \$3,000. Using this dollar value as an average, the cancellation of 2,676 military specifications and standards without replacement should produce an annual cost avoidance of over \$8M.

A December 1994 study by the Coopers & Lybrand/TASC Project Team reported that a number of management and process-type DoD standards contributed to a cost premium on the weapon systems and equipment the DoD buys. Many of these documents have since been canceled or converted to guidance only handbooks, thus eliminating the cost premium. Even for those standards which remain, the cost premium has been significantly reduced by the imposition of a waiver that must be granted by the Milestone Decision Authority (MDA). The MDA will approve a waiver request only if it can be demonstrated that a commercial alternative that meets the requirement does not exist, and that the imposition of the standard provides value commensurate with any cost premium incurred. While no specific dollar value can be attached to the elimination of these standards, the Coopers & Lybrand/TASC study does associate an average cost premium percentage with having to comply with these documents.

## Coopers & Lybrand/TASC Regulatory Compliance Cost Premiums

Military Document	Coopers & Lybrand/TASC Cost Premium (%)	Status of Document
MIL-STD-105	Less than 0.1	Canceled
MIL-STD-275	0.1	Canceled
MIL-STD-337	Less than 0.1	Canceled
MIL-STD-415	0.1	Canceled
MIL-STD-448	Less than 0.1	Canceled
MIL-STD-454	0.4	Canceled and replaced with guidance handbook
MIL-STD-490	0.2	Canceled
MIL-STD-499	0.3	Canceled
MIL-STD-680	Less than 0.1	Canceled
MIL-STD-804	Less than 0.1	Canceled
MIL-STD-1345	0.1	Canceled
MIL-STD-1367	0.2	Canceled
MIL-STD-1421	Less than 0.1	Canceled
MIL-STD-1519	0.1	Canceled
MIL-STD-1520	0.5	Canceled
MIL-STD-1521	0.5	Canceled
MIL-STD-1528	0.1	Canceled
MIL-STD-1535	0.1	Canceled
MIL-STD-1552	Less than 0.1	Canceled
MIL-STD-1561	Less than 0.1	Canceled
MIL-STD-1567	0.3	Canceled
MIL-STD-1586	0.1	Canceled
MIL-STD-1785	Less than 0.1	Canceled and replaced with guidance handbook
MIL-STD-1803	0.2	Canceled
MIL-STD-1806	Less than 0.1	Canceled
MIL-STD-2000	0.4	Canceled
MIL-STD-2077	Less than 0.1	Canceled
MIL-STD-2084	Less than 0.1	Canceled and replaced with guidance handbook
MIL-STD-2165	0.1	Canceled and replaced with guidance handbook
MIL-STD-2167	0.2	Canceled
MIL-STD-2168	Less than 0.1	Canceled
MIL-M-9868	Less than 0.1	Made inactive for new design
MIL-C-9877	0.4	Made inactive for new design
MIL-E-21981	Less than 0.1	Canceled
MIL-C-28809	0.1	Canceled
MIL-M-38510	0.1	Superseded by performance specification
MIL-H-38534	0.1	Superseded by performance specification
MIL-I-38535	Less than 0.1	Superseded by performance specification
MIL-M-38761	Less than 0.1	Made inactive for new design
MIL-STD-45662	0.1	Canceled
MIL-S-83490	0.2	Canceled

# Anecdotal Cost Savings and Cost Avoidance

As the first acquisitions begin to occur that are affected by the recent MilSpec Reform initiatives, the Department is witnessing some significant cost savings and cost avoidance resulting from the use of performance specifications, commercial standards, or the reduction of requirements.

SYSTEM OR ITEM	MILSPEC REFORM EFFORT	SAVINGS OR OTHER BENEFIT
Joint Direct Attack Munitions	<ul style="list-style-type: none"> <li>▶ Reduced Statement of Work from 137 to a 2 page statement of objectives</li> <li>▶ Data requirements reduced from 243 to 29 items</li> <li>▶ Eliminated all military specifications &amp; standards from solicitation</li> </ul>	<p>Estimated unit cost reduced from \$42K to \$14K</p> <p>Development costs reduced by \$70M</p> <p>Production costs reduced by an estimated \$1.5B</p>
Generic Acoustic Stimulation System (GASS)	<ul style="list-style-type: none"> <li>▶ Removed all military specifications and standards, except one</li> </ul>	Expected cost avoidance of over 26%
ARC-210 Electronic Protection Radio	<ul style="list-style-type: none"> <li>▶ Reduced number of military specifications and standards on contract from 78 to 35</li> <li>▶ Reduced data requirements from 56 to 20</li> </ul>	<p>System cost reduced by 19%</p> <p>Increased system reliability by 120%</p>
Abrams Eyesafe Laser Rangefinder	<ul style="list-style-type: none"> <li>▶ Used performance specification for acquisition</li> </ul>	\$3.6 M cost savings from previous buy
HMMWV Tires	<ul style="list-style-type: none"> <li>▶ Used non-government standards instead of military specifications</li> </ul>	Over \$1 M in savings
ARC-210	<ul style="list-style-type: none"> <li>▶ Reduced military specifications and standards by 45%</li> <li>▶ Reduced data items by 64%</li> <li>▶ Used best commercial practices and performance specifications</li> </ul>	Estimated program cost reductions of up to \$65M

SYSTEM OR ITEM	MILSPEC REFORM EFFORT	SAVINGS OR OTHER BENEFIT
Cooperative Engagement Capability Program	<ul style="list-style-type: none"> <li>▶ Reduced military specifications and standards from over 125 to less than 20</li> <li>▶ Reduced data items by over 50% from original contract</li> </ul>	Estimated cost reduction from FY95 through FY01 of over \$31M
Surface Ship Anti-Submarine Warfare Combat System	<ul style="list-style-type: none"> <li>▶ Reduced military specifications and standards from 67 to 1 military standard and 12 commercial standards</li> <li>▶ Reduced data items from 212 to 132</li> </ul>	Unit price of equipment reduced from \$30M to \$5M as a result of greater competition
KC-135 Avionics Upgrade	<ul style="list-style-type: none"> <li>▶ No military specifications and standards cited in the RFP</li> <li>▶ Reduced data items from 335 to 39</li> </ul>	Projected cost savings of over \$90M
MILSTAR Satellite Communications System	<ul style="list-style-type: none"> <li>▶ Reduced military specifications and standards from 110 to 43</li> <li>▶ Reduced Government acceptance events from 770 to 12</li> <li>▶ Reduced Government inspection requirements from over 19,000 to less than 100</li> </ul>	Estimated savings of \$236M
Joint Primary Aircraft Training System	<ul style="list-style-type: none"> <li>▶ Reduced military specifications and standards from 270 to 40</li> <li>▶ Reduced data items from 126 to 63</li> <li>▶ Used commercial maintenance manuals instead of military formats</li> </ul>	Estimated cost avoidance of \$300M
Clothing and textile items	<ul style="list-style-type: none"> <li>▶ Replaced 48 MilSpec items with commercial item descriptions</li> </ul>	Cost savings of over \$13M in FY95
Subsistence items	<ul style="list-style-type: none"> <li>▶ Replaced 6 MilSpec items with commercial item descriptions</li> </ul>	Cost savings of \$866K in FY95
AN/PAS-13 Thermal Weapon Sight	<ul style="list-style-type: none"> <li>▶ Replaced MilSpecs with performance specifications</li> <li>▶ Reduced data requirement</li> <li>▶ Reduced Government testing</li> </ul>	Overall cost for program phase reduced by 39% for a total cost savings of \$23.1M



*C-130 Periodic Depot Maintenance Program reduced the number of military specifications and standards cited in the RFP from 200 to only 5.*



## Summary

The Department of Defense has accomplished much MilSpec Reform work during the past two years. The document infrastructure available for use is changing with our emphasis on performance and commercial standards. More importantly, the almost automatic way in which specifications and standards have been applied in solicitations is changing. The initial results have been gratifying: more competition, greater access to commercial technology, improved performance, and over \$2B in anecdotal savings and cost avoidance.

There are some key areas on which we need to focus to finish what we have set out to do. We have made good progress in scrubbing solicitations for ACAT I and II programs to ensure requirements are stated in performance terms. Now we need to apply similar, aggressive reviews to our ACAT III programs as well. Reprocurements must also reflect performance requirements in a way that facilitates use of commercial products and practices, wherever possible.

The comprehensive screening of our documents required a great deal of effort. It is imperative that we follow through with the planned actions, or we will have merely expended resources — not invested them.

We must work in partnership with industry to determine where non-government standards should be used instead of military documents to describe commercial products and practices. Some of these needed non-government standards may never become available without the active participation and leadership of DoD personnel.

We have made a good start on developing a full-text, searchable, electronic data base of specifications and standards, but we still have a long way to go to complete the task. This tool, however, will significantly enhance industry's ability to respond to our needs, as well as greatly improve our capability and flexibility to support our acquisition system.

Secretary Perry kicked off the MilSpec Reform effort by quoting Victor Hugo, "...more powerful than the threat of mighty armies is an idea whose time has come." The reform we're engaged in is clearly an idea whose time has come, and it is one that is beginning to yield dividends.

